



## Memorandum

*To: Mike Cirian, P.E., EPA Onsite Remedial Project Manager*

*From: Dominic Pisciotta, CDM Smith*

*Date: February 5, 2013*

*Subject: Removal Protocol Changes for Alleyways, Driveways, and Parking Areas*

### **I. Introduction**

As part of the response actions on the Libby Asbestos Project, the United States Environmental Protection Agency (EPA) developed project-specific action levels and clearance criteria for the removal of Libby amphibole asbestos (LA) at residential and commercial properties. The *Draft Final Libby Asbestos Site, Residential/Commercial Cleanup Action Level and Clearance Criteria Technical Memorandum* (Tech Memo) (EPA 2003) provides specific details about these action levels, which are used to identify properties for response actions, as well as the evaluation criteria used to determine if the response actions were successful. Amendment A to the Tech Memo (EPA 2011) documents the modifications to investigation and sampling techniques and removal decision criteria since the publication of the Tech Memo in 2003. The Tech Memo and Amendment have provided the basis for the development of project documents governing property-specific investigation (e.g., general property investigations) and response action activities.

The purpose of this memorandum is to document changes to removal protocols not already included in Amendment A to the Tech Memo related to municipal or private alleyways, driveways, and parking areas. For the purpose of this memorandum, alleyways, driveways, and parking areas are defined as areas to be restored with structural fill only (i.e., no other types of fill material), excluding public rights-of-way. This memorandum, once finalized, will be used to update project guidance documents (e.g., Response Action Work Plan, Response Action Sampling and Analysis Plan) as appropriate.

### **II. Protocol for Removal of Municipal Alleyways, Driveways, and Parking Areas**

Upon identification of a municipal alleyway, driveway, or parking area requiring removal action, the design team will set up a meeting and site walk with the municipality representative and Libby Asbestos Project personnel prior to design to gather existing information.

For municipal alleyways, driveways, and parking areas requiring removal actions under the Libby Asbestos Project, the removal contractor (RC) will remove all soils to a minimum of 6 inches below ground surface (bgs). Once the area has been excavated to 6 inches bgs, a visual inspection for vermiculite will be performed by third-party quality assurance (TQA) personnel. If high levels of visible vermiculite are observed at excavation depth in any areas, those areas will be excavated an additional 6 inches (i.e., to 12 inches bgs). If intermediate or low levels of visible vermiculite are observed at 6 inches bgs, those areas will be excavated until vermiculite is no longer observable, to a maximum depth of 12 inches bgs. In alleyways with known buried utilities, contaminated material will be removed to a maximum depth of the utilities, at which point a visible vermiculite inspection will be conducted and a confirmation soil sample collected.

In the event an area is excavated to 12 inches bgs due to high, intermediate, or low levels of vermiculite (excluding areas with known buried utilities), TQA personnel will conduct an additional visual inspection for vermiculite. If no vermiculite, low, or intermediate levels of vermiculite are observed at excavation depth, TQA personnel will collect a confirmation soil sample. If high levels of vermiculite are observed at 12 inches bgs, the RC will excavate the area in until the level of contamination is reduced to acceptable levels, to a maximum excavation of 3 feet bgs. A visual inspection will be conducted following excavation and a confirmation soil sample collected as appropriate. Figure A shows the decision chart to be followed for removals in municipal alleyways, driveways, and parking areas.

In the event an area is excavated less than 12 inches bgs, the area will not be backfilled until sample results are reported as “none detected” (ND) for LA. If confirmation soil sample results are reported as greater than ND for LA, excavation will continue to a depth of 12 inches bgs, at which point a visual inspection for vermiculite will be conducted and a confirmation soil sample collected.

All visual inspections for vermiculite will be documented and confirmation soil samples collected in accordance with the procedures contained in the most recent version of the RA SAP.

Design depth for all public rights-of-way leading into municipal alleyways, driveways, and parking areas will be 12 inches bgs, and will follow standard clearance criteria in accordance with the RA SAP.

Upon completion of the design, the design team will schedule a follow-up meeting and site walk with the municipality representative and Libby Asbestos Project personnel to review the completed design.

### **III. Protocol for Removal of Residential/Commercial Alleyways, Driveways, and Parking Areas**

For private alleyways, driveways, and parking areas requiring removal actions under the Libby Asbestos Project, the RC will remove all soils to 6 inches bgs. Once the area has been excavated to 6 inches bgs, a visual inspection for vermiculite will be performed by TQA personnel. If no vermiculite is observed or low or moderate levels of vermiculite are observed at excavation depth, TQA personnel will collect a confirmation soil sample. If high levels of vermiculite are observed, the RC will excavate the area in until the level of contamination is reduced to acceptable levels or to a maximum excavation of 3 feet bgs. A visual inspection will be conducted and a confirmation soil sample collected as appropriate (i.e., high levels of vermiculite no longer observed). Figure B shows the decision chart to be followed for removals in private alleyways, driveways, and parking areas.

All excavated areas of private alleyways, driveways, and parking lots will be backfilled prior to receiving confirmation soil sample results. Results will be used for documentation purposes (i.e., record of any contamination left in place).

All visual inspections for vermiculite will be documented and confirmation soil samples collected in accordance with the procedures contained in the most recent version of the RA SAP.

Design depth for all public rights-of-way leading into private alleyways, driveways, and parking areas will be 12 inches bgs and will follow standard clearance criteria in accordance with the RA SAP.

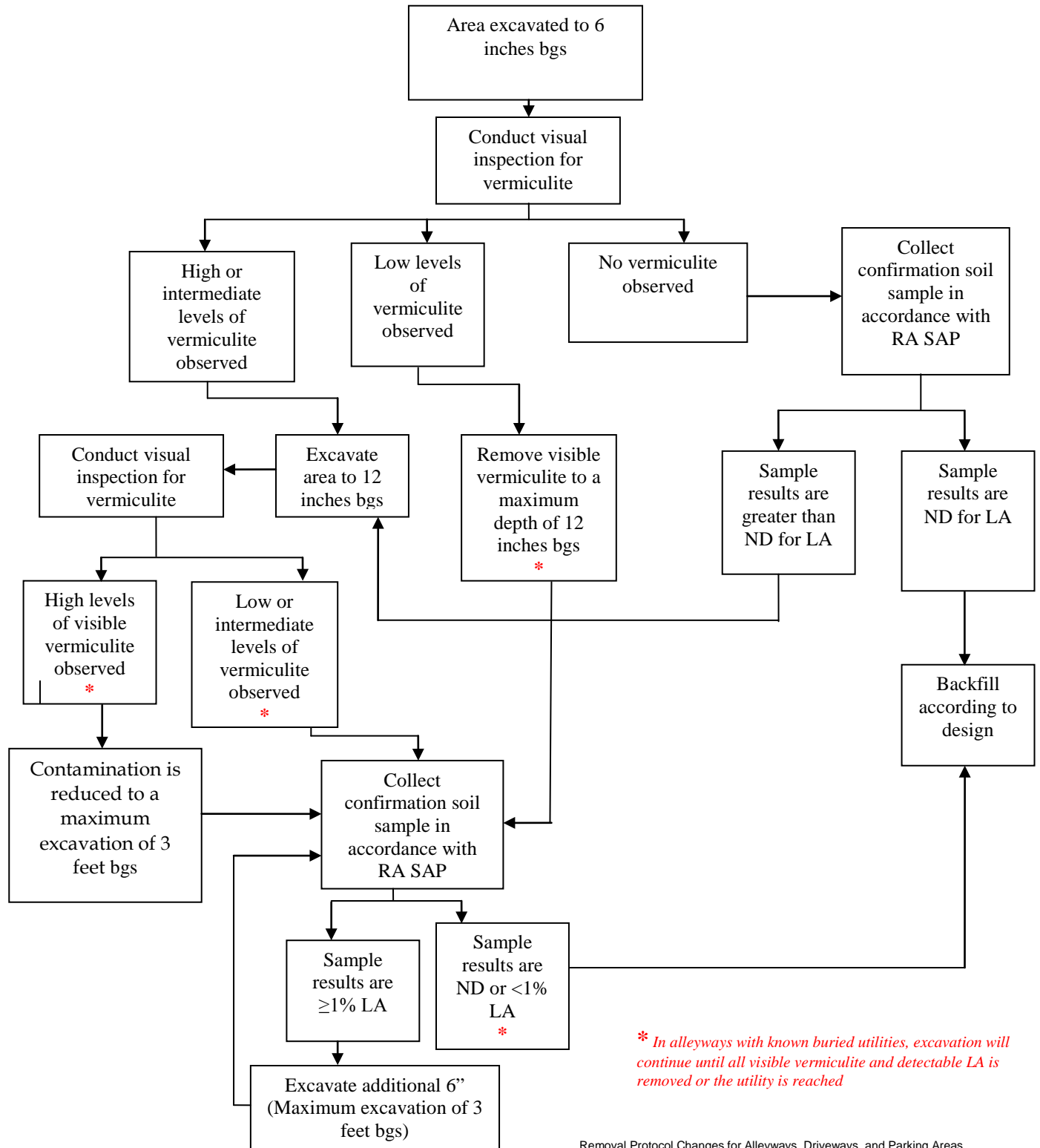
### **IV. References**

EPA. 2003. Draft Final Residential/Commercial Cleanup Action Level and Clearance Criteria Technical Memorandum, Libby Asbestos Project. December 15.

EPA. 2011. Draft Amendment A, Libby Asbestos Site Residential/Commercial Cleanup Action Level and Clearance Criteria Technical Memorandum, Libby Asbestos Project. April.

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**Figure A**  
**Municipal Alleyways, Driveways, and Parking Areas Decision Chart**



**Figure B**  
**Residential/Commercial Alleyways, Driveways, and Parking Areas Decision Chart**

